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MINUTES OF THIRD TARGET COMMITTEE MEETING - WASHINGTON, 28 May 1945.

PRESENT: General Farrell Dr. Tolman Colonel Seeman
Colonel Fisher Capt. Parsons Colonel Tibbets - 1st Lt.
Dr. Von Neumann Dr. Stearns Commander Ashworth
Dr. Wilson Dr. Penney Dr. Dennison
Major Derry Dr. Ramsey

1. General Farrell made a preliminary statement on future functions of the committee and pointed out the representation of the XX AF by Col. Fisher in lieu of Gen Norstad. General Arnold and General Groves had concluded that for some time into the future, control of the use of this weapon should reside in Washington rather than be released fully to the theater.

2. Results of the past Trinity test were discussed by Drs. Penney and Von Neumann. These, in general, closely confirmed expectations. Of the trial sample of active material, little remained in the immediate vicinity of the explosion. From these results, the safety of aircraft on subsequent trials is assured. Dr. Von Neumann indicated that in further experiments of this nature additional measurements at some height above the ground were necessary.

3. Announcement was made of the change since last meeting in the matter of fusing heights. This was due to further calculations by Dr. Brode. The heights now agreed upon are five settings from 1100 to 2500 ft., with planned detonations from 700 to 2100 ft. Col. Fisher was assured that this height of detonation was a well "proven" point.

4. a. Col. Tibbets reviewed the rehearsal program and status of training.

(1) The 21 starting crews after 4 months training have been reduced to 15, and each bombardier has had at least 50 individual releases at altitude, with most having had 80 to 100.

(2) The plan is to rely on the pilot direction indicator for final approach rather than the auto pilot and training has been along that line.

(3) On radar bombing, each crew had 3 to 4 missions per week for 6 weeks. This was only at 20,000 ft. altitude however as equipment was not pressurized. An island target was used. Col. Tibbets is confident that on a recognized target, they can average within 1000 ft.

(4) On visual bombing training, their 50% circle is within 500 ft. of the target. The maximum miss so far has been 2300 ft. with many reasons (different tail, drop tables, etc.) for this exceptional error.

(5) Col Tibbets felt that drops within 1000 ft. on visual and 2000 ft. on radar could be practically certain all things being normal. Col. Fisher stated that reliance should not be placed upon radar alone considering value of 1st gadget, but Tibbets pointed out that radar would be used somewhere in the operation although not on the actual drop.

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ways
(6) On load and distance tests, Col Tibbets stated crews had taken off at 135,000 lbs. gross load, flown 4300 miles with 10,000 lb. bomb load, bombed from 32,000 ft. and returned to base with 900 gallons of fuel. This is in excess of the expected target run and further tests will reduce the loading to reach the S.O.P. of 500 gallons of fuel on return.

No
b. Capt. Parsons reviewed characteristics of the pumpkin and its procurement status. A total of 19 have been shipped to Wendover; some have already been dropped. Bottleneck is cooling at McAlester, and the June quota of 30 may possibly drop to 25. Barring unforeseen delays or lack of safety (unit has been dropped 8 ft. on concrete) 25-30 pumpkins at base by 15 July seems assured if Victory ship is used. Colonels Fisher and Tibbets agreed that group should easily be operational by that date, and the latter desires not more than 5 practice runs per crew and readiness date of 20 August for the real thing. General Farrell indicated this latter date might have to be stepped up. Concluding on pumpkin production, Capt. Parsons felt production should reach 75 per month by mid-June, 60 for overseas, 15 for domestic use. Col. Tibbets stated that in September-October he could use 75. The probability of making overseas shipments at two week intervals to avoid storage accumulation at Port Chicago was mentioned.

No
c. The modification of aircraft from accommodation of pumpkin to the L.B. was estimated to require 6 hours. This is much less than the modification to carry H.E. bombs; this would amount to practically a major overhaul job of about 3 weeks (Col. Tibbets) The importance of pumpkin production and shipment is therefore emphasized.

No
d. (1) On movement of AAF units, Col. Tibbets stated ground echelons were already at destination, except for the Ordnance company due to arrive 1 July. Cmdr. Ashworth concurred, with further remark that this unit should be operational 15 July.

No
(2) The technical group of Capt Parsons and Dr. Ramsey has skeleton crews for all operations set up to leave with an ETA of 1 July. In addition, so that there will be at least 2 individuals for each function, a further group is to leave by 1 July, ETA 25 July. On arrival of this latter group L.B. and F.M. could both be handled. 1 August is readiness date for first L.B. and 1 1/2 days is estimated assembly time. Decision is still in air on method of shipment-assembled or disassembled; Capt. Parsons stated the Navy would prefer a disassembled shipment to avoid "special" handling to attract attention. The L.B. shipment and readiness practically depends upon supply of active material. Since other components are about ready now it might be worthwhile to despatch a water shipment when 80% of active material is ready and send last 20% by air.

GREEN HORNET

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(3) Dr. Ramsey stressed importance of Red Ballspeed for shipment of 3rd batch, since certain components were omissions from 2nd batch. Departure of 3rd batch now set up for 1 July.

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5. a. Normal procedure on target designation and assignment to XXI B.C. by XX AF was explained by Col. Fisher, and the 3 reserved targets for the first unit of this project were announced. With current and prospective rate of 20 AF, H.E. bombing, it is expected to complete strategic bombing of Japan by 1 Jan 46 so availability of future targets will be a problem. The XX AF is also entering a program of Tall Boy and Grand Slam H.E. bombs. It is apparent therefore that staging forward or forward displacement of the base may have to be faced. Capt. Parsons said personnel presently set up could be divided into two groups, that Iwo was being prepared for emergency unloading and that a standard assembly building was being designed and prepared, so that by June a decision to establish a new base should be followed by completion in 8 weeks.

b. Dr. Wilson raised the point that while targets for efficient use of weapon might be exhausted, there might be opportunities for effective use. It was agreed that study of fusing points for F.M. should be undertaken to adapt it to tactical use, although its use for penetration was unquestionably impracticable. Present designated targets shouldn't take more than 6 or 7, and perhaps less if conservative estimate of power is exceeded.

c. Dr. Stearns presented data on Kyoto, Hiroshima and Niigata and the following conclusions were reached:

- (1) not to specify aiming points, this to be left to later determination at base when weather conditions are known.
- (2) to neglect location of industrial areas as pin point target, since on these three targets such areas are small, spread on fringes of cities and quite dispersed.
- (3) to endeavor to place first gadget in center of selected city; that is, not to allow for later 1 or 2 gadgets for complete destruction.
- (4) further data on effects of H.E. and pumpkins on buildings is very desirable; these could be classified as Secret and come in through normal channels

It was urged that reports of XX AF Damage Analysis Group (Mr. Brothers) be available for study of blast effects so that relative effect of gadget might be more closely determined. Dr. Stearns will set up this procedure, and the letter to be sent to General LeMay would be made to include a paragraph on the Pumpkin program, evaluation of damage and security for main weapon. Dr. Von Neumann gave it as his opinion that any hills in vicinity of proposed targets were too remote to have serious effect. Dr. Wilson reiterated that the 5 p.s.i. used in plans was very conservative in his opinion and that 3 p.s.i. should be sufficient for most Japanese buildings, so greater effect for L.B. and F.M. could therefore be expected.

6. a. Regarding weather coverage, Col. Fisher was confident everything possible was being fed into weather center and Capt. Parsons is to discuss additional submarine participation with Capt. Hill (of Adm. Nimitz' staff) and Adm. Funnell. On the possibility of returning to base with L.B. in case of bad weather, it was agreed comments from here could be advisory only since

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H.B. (V. Neumann)

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final decision had to lay with people on the spot. Dr. Ramsey discussed the planned system for testing the gadget in the aircraft and the plan for removal of propelling charge from the L.B. in case of emergency landing.

③ b. Trials on bank and turn capabilities of B-29s had been completed according to Col Tibbets and it was pointed out as incumbent upon Capt. Parsons and Col Tibbets to conclude the procedure for the first mission and brief all participants. The aircraft could not react to the extreme limits heretofore discussed at Y.

c. Dr. Stearns stated information of abortive sorties had been gathered and would be discussed with Col Tibbets. The data was assembled from experience in training in the U.S. and in overseas units but would not be directly applicable to the present special unit.

7. Nothing was added to the conclusion of the previous meeting that no coordinate mission should be undertaken. Continual observation of the QB by accompanying aircraft was stressed and these aircraft could drop the technical instruments under consideration. The necessity to adhere to radio security and other operational procedure in force in the theater was pointed out. Capt. Parsons discussed the probable sequence of operations for the first mission.

8. Gen Farrell adjourned the meeting until further call, possibly after next Trinity test.

PROBABLY DRAFTED
BY COL SEEMAN AND
MAJOR DEERY

R. Seeman
Colonel, CE.

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